APPENDIX B. Inspection and maintenance

Section (1) applies to all projects

(1) During construction

(a) Inspection and maintenance. Inspect disturbed and impervious areas, erosion and sedimentation control measures, materials storage areas that are exposed to precipitation, and locations where vehicles enter or exit the site. Do the inspections at least once a week before and after a storm event, and prior to completion of permanent stabilization. A person with knowledge of erosion and stormwater control, including the standards in this permit and any departmental companion document to this permit, must conduct the inspection. This person must be identified in the inspection log. If best management practices (BMPs) need to be modified or if additional BMPs are necessary, implementation must be completed within 7 calendar days and prior to any storm event (rainfall). All measures must be maintained in effective operating condition until areas are permanently stabilized.

(b) Inspection log (report). Keep a log (report) summarizing the inspections. The log must include the name(s) and qualifications of the personnel making the inspections, the date(s) of the inspections, and major observations about the operation and maintenance of erosion and sedimentation controls, materials storage areas, and vehicles access points to the parcel. Major observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and location(s) where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken.

Sections (2) - (5) apply to all projects except those including 1 to 5 acres of disturbed area, and less than 20,000 sq. ft. of impervious area in the direct watershed of a waterbody most at risk or less than 1 acre of impervious area in other areas.

(2) After construction

(a) Maintenance plan. Keep a plan for the inspection and maintenance of the site's stormwater management system and permanent erosion and sedimentation controls. The plan must be developed by a professional engineer or other professional knowledgeable with the specific design of the site's stormwater management measures and permanent erosion and sedimentation controls. At a minimum, the inspection and maintenance plan must include the following items.

(i) List of facilities to be maintained. List the stormwater management measures and erosion and sedimentation controls that are to be inspected and maintained (e.g. "parking lot catch basins").

(ii) List of inspection and maintenance tasks. List the inspection and maintenance tasks required for each stormwater management measure or erosion and sedimentation control (e.g. "remove accumulated sediments in basin sumps"). List the specific qualifications (if any) needed by the person performing each task (e.g. "a professional engineer must perform the inspection of the retention pond's embankment").

(iii) Task frequency. Indicate the required frequency of performing each inspection or maintenance task (e.g. "annually in early spring").

(iv) Responsible party. State the name, job title, employer, employer address, and phone number of the person responsible for ensuring that inspection and maintenance tasks are done.

(v) Designer information. Provide the names, job titles, employer addresses, and phone numbers of the engineers and other professionals who designed the site's stormwater management measures and permanent erosion and sedimentation controls. This includes suppliers of proprietary stormwater management measures or proprietary erosion and sedimentation controls used on the site.

(vi) Inspection and maintenance log. Provide a maintenance log to record the inspections and maintenance performed on the site. Fill out the a maintenance log by giving the date on which ~~the~~ each inspection or maintenance task was performed, a description of the inspection findings or maintenance ~~work~~ completed, and the name of the inspector or maintenance personnel ~~doing the work~~ performing the task. If a maintenance task requires the clean-out of any sediments or debris, indicate where the sediment and debris was disposed after their removal.

(b) Maintenance tasks. The following areas, structures, and measures must be inspected and maintained. The basic inspection and maintenance tasks are given for each. Areas, structures, and measures other than those listed below may need inspection on the site. Inspection or maintenance tasks other than those discussed below developed may be included in the maintenance plan developed for the site.

Note: Expanded and more-detailed descriptions for many of these may be found in the Maine DEP's *Stormwater Management for Maine: Best Management Practices*.

(i) Vegetated Areas. Inspect vegetated areas, particularly slopes and embankments, early in the growing season or after heavy rains to identify active or potential erosion problems. Replant bare areas or areas with sparse growth. Where rill erosion is evident, armor the area with an appropriate lining or divert the erosive flows to on-site areas able to withstand the concentrated flows. Seepermanent stabilization standards in Appendix A(4).

(ii) Stormwater channels. Inspect ditches, swales and other open stormwater channels in the spring, in late fall, and after heavy rains to remove any obstructions to flow, remove accumulated sediments and debris, to control vegetated growth that could obstruct flow, and to repair any erosion of the ditch lining. Vegetated ditches must be mowed at least annually or otherwise maintained to control the growth of woody vegetation and maintain flow capacity. Any woody vegetation attempting to grow growing up through riprap linings must also be removed. Repair any slumping side slopes as soon as practicable. If the ditch has a riprap lining, replace riprap on areas where any underlying filter fabric or underdrain gravel is showing through the stone or where stones have dislodged. The channel must receive adequate routine maintenance to maintain capacity and prevent or correct any erosion of the channel's bottom or sideslopes.

(iii) Culverts. Inspect culverts in the spring, in late fall, and after heavy rains to remove any obstructions to flow; remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit; and to repair any erosion damage at the culvert's inlet and outlet.

(iv) Catch-basin systems. Inspect and, if required, clean-out catch basins at least once a year, preferably in early spring. Clean-out should include the removal and legal disposal of any accumulated sediments and debris at the bottom of the basin, at inlet any grates, at any inflow channels to the basin, and at any pipes between basins. If the basin outlet is designed to trap floatable materials, then remove the floating debris and any floating oils (using oil-absorptive pads).

(v) Roadways and parking surfaces. Clear accumulations of winter sand in parking lots and along roadways at least once a year, preferably in the spring. Accumulations on pavement may be removed by pavement sweeping. Accumulations of sand along road shoulders may be removed by grading excess sand to the pavement edge and removing it manually or by a front-end loader. Grading of gravel roads, or grading of the gravel shoulders of gravel or paved roads, must be routinely performed to ensure that stormwater drains immediately off the road surface to adjacent buffer areas or stable ditches, and is not impeded by accumulations of graded material on the road shoulder or by excavation of false ditches in the shoulder. If water bars or open-top culverts are used to divert runoff from road surfaces, clean-out any sediments within or at the outlet of these structures so to restore their function.

(vi) Buffers. Inspect resource and treatment buffers at least once a year for evidence of erosion, concentrating flow, and encroachment by development. Management of a buffer's vegetation must be consistent with the requirements in any deed restrictions for the buffers. Wooded buffers must remain fully wooded and have no disturbance to the duff layer. Vegetation in non-wooded buffers must be cut no more than three times per year and no shorter than six inches. Erosion within a buffer must be repaired as soon as practicable. If flows are concentrating within the buffer, site grading, level spreaders, or ditch turn-outs must be used to ensure a more even distribution of flow into the buffer. Check downslope of all spreaders and turn-outs for erosion. If erosion is present, adjust or modify the spreader's or turnout's lip to ensure a better distribution of flow into the buffer. Clean-out any accumulation of sediment within the spreader bays or turn-out pools.

(vii) Stormwater detention and retention facilities. Each detention basin or retention pond built for the control or treatment of stormwater must have a maintenance plan developed by the facility's design engineer. At a minimum, the maintenance must include the tasks listed below.

(AA) Embankment inspection and maintenance. Inspect the impoundment's embankments annually or after major storms to identify excessive settlement, slope erosion, internal piping, and downstream swamping. Evidence of any of these conditions must be reviewed by a professional engineer immediately. Mow the embankment at least annually to control the growth of woody vegetation.

(BB) Outlet inspection and clean-out. Inspect the impoundment's outlet control structure annually or after major storms to identify broken seals, obstructed orifices, and plugged trash racks. Remove and dispose of any sediments and debris within the control structure. Repair any damage to trash racks or debris guards as soon as practicable.

(CC) Emergency spillway maintenance. Complete yearly inspections of the impoundment's emergency spillway, if it has one. Maintenance must include the mowing of vegetated spillways to control woody vegetation and the replacement of any dislodged stone in riprap spillways.

(DD) Sediment removal and disposal. Provide for the occasional removal and disposal of accumulated sediments within the impoundment and the impoundment's forebay, if it has one. The clean-out frequency ranges from five to twenty years, depending on the sediment load to the pond or basin.

(viii) Runoff infiltration facilities. Each infiltration facility built for the control or treatment of stormwater must have a maintenance plan. The plan must be approved by the department for a project permitted under the Site Law. The maintenance plan must include the tasks listed below.

(AA) Clean-out pretreatment measures. Inspect and clean-out any pre-treatment measures installed to limit the amount of sediment and hydrocarbons entering the infiltration measure. This must be done at least semi-annually to limit the wash-out of captured sediments and other pollutants to the infiltration measure during large storms.

(BB) Infiltration rehabilitation. Rehabilitation of infiltration measures is generally necessary every three to ten years, depending on the soil conditions, infiltration surface treatment, and sediment load to the infiltration measure. Generally, renewal is necessary if the infiltration measure fails to drain within 72 hours after a rainfall of one-half inch or more. For sod infiltration basins, rehabilitation can usually be accomplished through the tilling and replanting of the soil. Rock-lined basins or stone-filled trenches will usually require removal of the stone, replacement of any underlying filter fabric, and the tilling or removal of the underlying soil.

(CC) Sediment removal and disposal. Provide for the occasional removal and disposal of accumulated sediments within the infiltration area. The clean-out frequency ranges from two to ten years, depending on the sediment load to the infiltration measure.

(ix) Proprietary treatment devices. Contract with a third-party for the removal of accumulated sediments, oils, and debris within the device and the replacement of any absorptive filters. The frequency of sediment clean-out and filter replacements must be consistent with the unit's storage capacity and the estimated pollutant load from the contributing drainage area. This clean-out frequency is usually established by the manufacturer of the proprietary system when sizing the device for the project.

Note: Other practices and measures. Contact staff in the department's Division of Watershed Management for assistance developing inspection and maintenance requirements for other drainage control and runoff treatment measures installed on the site.

Note: The maintenance needs for most measures may be found in the Maine DEP's *Stormwater Management for Maine: Best Management Practices.*

(3) Maintenance contract. The applicant must demonstrate through submission of an executable contract with a qualified professional that maintenance will be performed as required.

(4) Certification. Within three months of the expiration of each five-year interval from the date of issuance of the permit, the permittee shall certify the following the department.

(a) Identification and repair of erosion problems. All areas of the project site have been inspected for areas of erosion, and appropriate steps have been taken to permanently stabilize these areas.

(b) Inspection and repair of stormwater facilities. All aspects of the stormwater quantity and quality control system have been inspected for damage, wear, and malfunction, and appropriate steps have been taken to repair or replace the facilities.

(c) Maintenance. The erosion and stormwater maintenance plan for the site is being implemented as written, or modifications to the plan have been submitted to and approved by the department.

(5) Period [*moved from Section 4 of existing rule*]**.** The permittee must maintain all components of the stormwater management system until it is formally accepted by the municipality or quasi-municipal district, or is placed under the jurisdiction of a legally created association that will be responsible for the maintenance of the system. The charter of such an association must be approved by the department. If a municipality or quasi-municipal district chooses to accept a stormwater management system, it must provide a letter to the department stating that it assumes responsibility for the system, and will maintain all components of the system in compliance with department standards. Upon such assumption of responsibility, and approval by the department, the municipality, quasi-municipal district, or association must comply with all terms and conditions of the permit.

(5) Additional requirements. Additional requirements may be applied on a site-specific basis.